

Obexelimab

Chemical Properties

CAS No. : 1690307-05-1

Formula:

Molecular Weight: 147.44 kDa

Storage: Store at low temperature
-20°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	Obexelimab (XmAb5871) is a bifunctional monoclonal antibody that binds to both CD19 and FcγRIIb, inhibiting the activity of B cells, plasma cells, and plasma cell precursors. Obexelimab is used in the study of autoimmune diseases such as systemic lupus erythematosus.
Targets(IC50)	Apoptosis,Immunology/Inflammation related
In vitro	<p>Obexelimab induces the expression of genes associated with apoptotic pathways and promotes B-cell apoptosis. [1]</p> <p>A 10 µg/mL solution of Obexelimab, applied for 3 minutes, inhibits B-cell activation and function by suppressing BCR-mediated calcium influx and promoting FcγRIIb phosphorylation. [2]</p> <p>Methods: Human resting B cells were isolated and purified from tonsils. Cells were pretreated with 10 µg/mL obexelimab for 30 minutes, then stimulated for 30 minutes with 2.5 µg/mL anti-Ig (BCR activation), 1 µg/mL CpG ODN (TLR9 activation), or a combination of both. Western blot analysis was performed to detect the phosphorylation levels of FcγRIIb (Y292), AKT, and ERK1/2 phosphorylation levels. Results: Obexelimab induced phosphorylation at the FcγRIIb Y292 site and significantly inhibited AKT and ERK phosphorylation induced by BCR and TLR9 activation, either alone or in combination. [3]</p> <p>Methods: Purified B cells were isolated from ACPA-positive RA patients; after treatment with obexelimab (10 µg/mL), the cells were stimulated with R848 (1 µg/mL) and IL-2 (10 ng/mL) for 3 days; ELISPOT was used to detect IgG AFC specific to citrullinated filamentous protein peptides. Results: Obexelimab significantly reduced the number of cells secreting citrullinated filamentous protein-specific autoantibodies in RA patients, directly inhibiting the production of pathogenic autoantibodies.[4]</p>
In vivo	10 mg/kg Obexelimab, injected intraperitoneally twice weekly, suppressed autoimmune responses in immunodeficient mice implanted with peripheral blood mononuclear cells (PBMC) from rheumatoid arthritis (RA) patients. [2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.0068 mL	0.0339 mL	0.0678 mL
5 mM	0.0014 mL	0.0068 mL	0.0136 mL
10 mM	0.0007 mL	0.0034 mL	0.0068 mL
50 mM	0.0001 mL	0.0007 mL	0.0014 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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